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ABSTRACT

The study identifies specific financial indicators for higher education, indicates the recommended source of data, and suggests a survey for the Higher Education Panel that could be used to supplement the data. The use of the indicators is explored and it is explained that the indicators allow the grouping of institutions for comparative analysis. A model of institutional financial flows is provided and actions that institutions can take to ameliorate the effects of fiscal constraints are identified. The proposed survey has 12 questions with a total of 32 requested responses. The components of an institution's resources are discussed, and include such areas as financial assets, faculty, administrators, students, facilities, and reputation. A list of 21 indicators in four categories--financial resources, estimated risk, changes affecting financial resources, and changes in nonfinancial resources--is provided. Extensive appendices include such items as a list of financial indicator research publications, the proposed Higher Education Panel survey, and the correspondence with national higher education financial health experts regarding the proposed survey. (PHR)

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A Design for a Higher Education Panel Survey on Trends Affecting the Financial Condition of Higher Education

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NATIONAL INSTITUTE OF EDUCATION

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Introduction

This paper develops a number of financial indicators for higher education institutions derived from Higher Education and General Information Survey (HEGIS) data, a proposed Higher Education Panel (HEP) survey, and other available sources. The uses and limitations of these indicators will be discussed below as well as the underlying financial processes which they seek to monitor. As with human subjects, there are few statistics derived from institutional questionnaires which allow one to determine the exact health of any individual. Institutional questionnaires can, at best, reveal only changes in gross financial relationships. When we find these trends, we know to look deeply for causes and more complete explanations.

Financial statistics give us only one dimension of the state of higher education. Higher education institutions are complex organizations with many dimensions along which changes may be occurring. These dimensions include financial resources, academic quality and mission. In this paper we will concentrate on the financial resource dimension with only passing references to surrogates for quality and mission.

This is not to degrade the merit of monitoring the financial dimension. Financial measures, if appropriate, are useful becuase they often mirror changes in quality or mission and occasionally even signal coming revisions to quality or mission. Financial measures tend to more be sensitive to changes in the environment* than measures of quality or mission because an institution often uses financial resources to buffer its quality and mission from adverse pressures. Thus, changes in financial indicators may show the degree of stress

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*We will use the term environment to indicate forces external to the institution including the number of college-age people, inflation, salary competition, etc.

which the institution is facing and may show this stress more immediately than shifts in measures of quality or mission.

Use of Indicators

As the development of financial indicators for colleges and universities has progressed, three uses have emerged. First, institutions have tried to use comparative financial indicators to evaluate their condition against their peers. The most appropriate indicators permit institutional management to isolate the differences in financial condition which are caused by the condition of higher education in general as opposed to the institution specifically. The publication of such indicators in "Self-Assessment of Financial Condition" responds to this use.*

Second, the national postsecondary education organizations need to know the trends of financial condition to adequately assess the "industry." Rather than an absolute definition of financial condition, these financial indicators need only measure trends. The focus for these organizations is on those indicators which are "leading" or which forecast change such as trends in entering and transferring students which "lead" changes in total enrollment.

Third, the federal government needs financial indicators. Forecasts of institutional demise are important to permit timely political assessment of an appropriate role for state and federal government. Several states are using financial indicators for this purpose. The federal government also has another important use for the indicators. As institutions begin to reduce programs or to fail, many students will be denied access to institutions of higher education

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*Dickmeyer, N. and Hughes, K. S., "Self-Assessment of Financial Condition: A Preliminary Edition of a Workbook for Small Independent Institutions," National Association of College and University Business Officers/American Council on Education, Washington, D.C., June, 1979.

at the same time that student access has been a major federal policy objective.* The assessment of the impact of institutional demise or program reduction on federal policy objectives is the primary use identified for this survey proposal, although the other needs identified above will also be benefited.

The indicators developed below will allow the grouping of institutions along lines which are indicative of the pressures which institutions are facing and their current success in meeting those pressures. These groupings will allow further analysis such that the performance of institutions under great financial duress may be compared with other institutions with less apparent duress. Several questions of importance to national higher education policy may then be addressed.

- Are there indications that higher education institutions are more susceptable to failure than previously? Are there groups of institutions which show declining resources (and increased risk of demise)?
- What are the characterisitics of institutions which are facing greater financial concern?
- Can we anticipate other problems by examining the trends in financial resources among institutions? Are program cutbacks affecting students from particular regions, economic backgrounds, or ethnic backgrounds unequally because of the uneven distribution of types of students among types of institutions?

A final purpose of the proposed assessments is the pursuit of a better understanding of certain of the statistics as they apply to different types of institutions with different financial prospects. Although a statistic like dormitory occupancy makes good intuitive sense in that schools with low occupany should be suffering from financial strain, we may find, after examining the

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*National Commission on Financing Postsecondary Education, Financing Postsecondary Education in the United States, U.S. Government Printing Office, Washington, D.C., December, 1973.

statistics, that the schools with dormitory vacancies are the ones with the greatest confidence in the future, the strongest growth trends, and the best overall conditions.

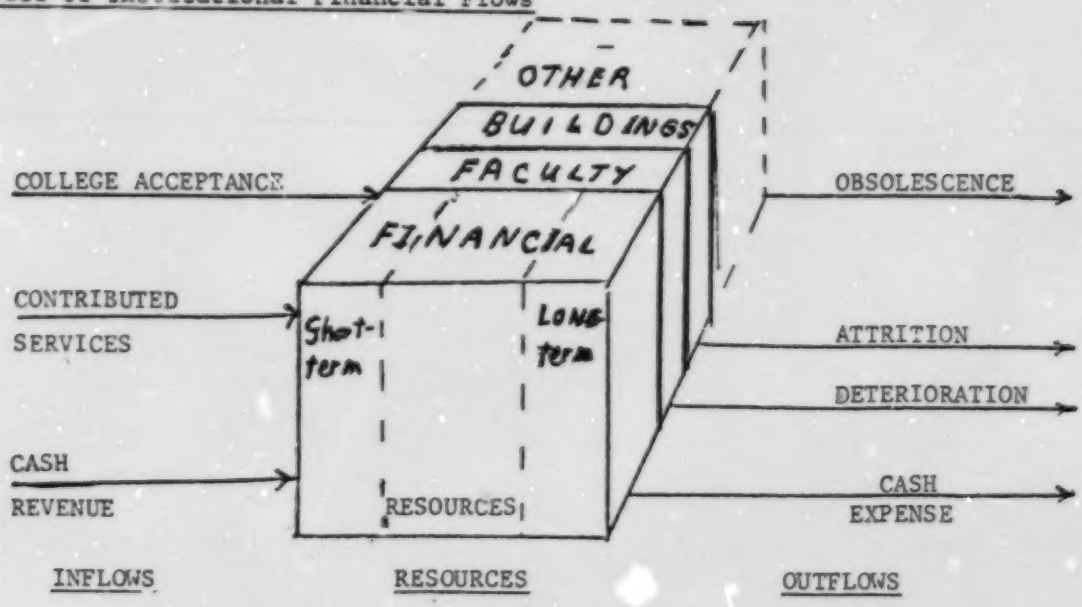
The subject of financial indicators for higher education has been widely studied. This paper will not break much new ground in the area, but will try to integrate the work of many of these researchers within a conceptual framework of institutional financial flows. With this framework as a reference, it should be possible to derive an adequate set of indicators from the works of others in the area--with the addition of a few new statistics.

Part of the confidence that indicators are possible stems from the models we are provided from private industry, where numerous industry-wide and national indicators are used to summarize industry health and activity. While these models provide us with confidence that our task of describing the state of higher education can be accomplished, the experience of private industry should also make us cautious. Each industry indicator has a carefully developed set of applications and limitations. There is no single overall "health" indicator (other than the Gross National Product, which may be equivalent to the overall higher education production of graduates). Financially, we can assess each industry's debt load or profit margin, and we can learn something about that industry, but we cannot succeed very often in comparing industries. Even within industries, analysts are careful to point out the limitations of their indicators.

A Model of Institutional Financial Flows

The diagram above depicts the resource flows of an institution. The center box represents an institution's stock of resources: financial, faculty, buildings, administrators, students, reputation, and so forth. These represent the institution's accumulation of valuable items and intangibles.

A Model Of Institutional Financial Flows



Financial resources are somewhat more measurable than resources like the quality and adequacy of faculty and certainly more measurable than an intangible like reputation. Resources may be accumulated when inflows are higher than outflows, where inflows can come in the form of cash revenue, contributed services or the acceptance of the college by students, and where outflows can also be in the form of cash as well as deterioration and obsolescence of noncash resources. Resources also have certain appropriate reference periods. For example, the endowment as a resource has a much longer useful life to the institution than a reserve for building improvements. The amounts in the two pools cannot be easily compared because of their different reference periods.

The financial resources referred to above are net resources: the difference between assets and liabilities, for example. That is, they are the resources left over after all debts are paid. William G. Bowen once declared that institutions simply tend to spend all they receive, in which case the measure of resources is irrelevant. Previous studies have indicated, however, that some institutions spend more than they receive and accumulate more debts than assets (i.e., negative net resources). Other institutions not only accumulate some financial resources, but are successful in converting financial resources into other kinds of resources like physical plant and high quality faculty.

Why do institutions need resources? Having negative financial resources is clearly an undesirable situation. If these negative financial resources are short-term, then the possibility exists that the institution may find itself unable to meet short-term debt commitments, because more debt exists than current assets to pay off the debt. This situation may require the sale of assets needed for other purposes. It may also force new longer term financial commitments with added costs, or even--if no other resources are available--force the closing of the institution.

Financial resources of an intermediate term can be used within a two to three year period and represent reserves which the institution has accumulated. These reserves can be used to buffer the other resources in the event of a downturn in revenue flows caused by, for example, a drop in student registrants. These resources may also be used to attempt a strategic redirection of the college. In this way, these resources may be invested in an innovative program with a payoff sometime in the future.

The necessary amount of financial resources for any institution is determined by many factors. The more fluctuation which income undergoes from year to year, the more the institution should set aside as reserves to protect its nonfinancial resources. Faculty should not be precipitously fired or hired with every fluctuation in enrollment; some funds must be available to smooth the transition or to institute a program to counter the negative trends. The more flexible an institution can be with its expenses, and yet maintain stability, the smaller a financial resource buffer it needs. An institution with a highly tenured faculty and a large commitment to debt service is in a poor position to respond to income fluctuations without some financial protection in the form of reserves.

Many of the financial health indicators previously developed can be fit easily within this framework. Some researchers have sought to measure the rate of change of inflows, the rate of change of outflows, the relative rate of change of both outflows and inflows, changes in financial resource levels, changes in nonfinancial resource levels, and changes in the need for financial resources. The following table lists the approaches used by many financial health researchers. (Appendix A gives the specific indicators used by these researchers.)

The indicators proposed in this paper will eliminate some of the duplication in the indicators previously used as shown in the table, and will improve the

attempted measures. Comparisons of rates of inflow and outflow are less easy to interpret than straight measures of resource accumulation as will be proposed. Also, comparing rates of change is dangerous because the bases initially must be equal to allow accurate comparison.

INDICATORS USED OR PROPOSED

Researchers*	RATE OF INFLOW: Enrollment	RATE OF INFLOW: Revenue Flow	Revenue MIX	RESOURCE CHANGE: Financial	Non-Financial: Students	Non-Financial: Faculty	Stu. Fac.	PLNT.	Finan. Resource Needs	Rate of Outflow: Expenses	Exp. MIX
Jellema	X	X		X			X			X	
Lanier/Andersen	X	X		X						X	X
Andersen	X			X			X	X	X	X	X
NACUBO			X	X		X					X
Collier		X	X	X					X		
Jenny	X	X		X				X	X		
Wormley				X						X	X
Farmer	X			X	X				X		
McNamee	X		X	X	X				X	X	
Lupton	X		X	X	X			X	X	X	X
VPI	X	X	X	X					X	X	X
Minter	X	X		X		X					X
Pa.	X	X	X	X							
Coldren	X	X	X	X	X		X	X			X

*See References For Sources.

Appendix A lists sources and indicator definitions.

Part 2: Indicators to be Used and Why?

Actions by Fiscally Contrained Institutions

Before reviewing the financial indicators themselves, it may be useful to identify some of the actions which an institution can take to ameliorate the effects of fiscal constraints. First, an institution may increase revenue. While this is most frequently interpreted as increasing traditional enrollments, there are other actions which can be taken to increase revenues, like fund-raising campaigns or legislative lobbying. Second, an institution may eliminate or defer investment. New programs require major--though often hidden--investment by the institution. Crowded facilities, limited or nonexistent equipment replacement or improvement, lack of new academic programs (particularly in disciplines requiring heavy initial investment) and deferred maintenance are all actions which will reduce institutional flexibility in the future. Third, an institution may reduce costs. Under duress, many institutions will initially focus on reducing costs. There is a limit to cost reduction beyond which the quality of the programs is reduced and the access of students to programs is limited by decreased institutional offerings.

Revenue can be increased either by increasing tuition and fees (a price increase) or by reducing the institutional subsidy by using unrestricted student grants from current funds. This approach tends to reduce enrollments. Enrollments of students from low income families are particularly reduced by any price increases, and some institutions will also suffer enrollment declines of middle-income students. Thus, net price and enrollment must be viewed together, because additional enrollments can produce increased revenue. For example, many colleges and universities in urban and suburban locations are attempting to increase continuing education enrollments. Since continuing education is usually offered only if revenues exceed direct costs, the institution usually stands to benefit.

Continuing education enrollments will thus be included as one of the financial indicators, although it has not previously been used by analysts.

Increased enrollments do not necessarily provide increased contribution to the institution's fixed costs. Some students -- particularly those needing remediation -- impose additional unreimbursed costs on the institution. In New York, for example, the State Educational Opportunity Fund and Higher Education Opportunity Program Grant recognize this burden and subsidize remediation. This changes institutional incentives for enrolling students requiring remediation. Thus, both enrollments and costs per student must be monitored to see the impact of enrollment on the financial condition of an institution. (More than 23% of entering freshmen believe they should have received remedial instruction in one or more areas.) Additional enrollments can also be attracted by differential pricing through the use of unrestricted student financial aid from current fund revenue. Financial indicators should monitor the impact of such student financial aid on both enrollments and revenue per student.

Institutions may also charge for services to the community which were previously free. For example, there may be a charge for using the library, physical education facilities or computer which were previously provided at little or no charge. Because the amount of such charges are hidden in the total current fund revenue, they cannot be included separately in the financial indicators.

In order to continue to offer relevant educational programs of high quality, institutions must invest in the development of curricula and improvements to facilities and equipment. At this time financial indicators can not reflect the investment strategy of an institution. While some of the HEGIS reports indicate, through enrollments or degrees earned, the scope of academic programs, there is no available information on the relationships

of these programs to enrollments or financial condition.* Since the number and type of programs affect both costs and enrollments, the net short term impact of financial condition is not clear.

It appears that both public and private institutions are wearing out equipment faster than they are replacing it. Failure to replace or repair equipment does affect instructional quality and postpones needed investment. This failure will not be identified in the current financial indicators until current or plant funds are used for replacements, repair, or additions.

However, these actions are primarily decisions which have long-range impact on the financial condition of the institution. While they may blunt federal objectives--student access and student opportunity--they do not immediately affect the likelihood of institutional demise. It is important to recognize that financial indicators may not be fully satisfactory for the anticipated federal use. They are reasonable predictors of institutional demise in general, but cannot be used to identify specific institutions or specific actions taken by institutions to cope with fiscal constraints.

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*The California State Universities and Colleges have established a relationship between average cost per student and the number of programs per 1,000 students showing increased costs with increased number of programs.

THE INDICATORS

An Overview

At the present time there are no generally accepted financial indicators, but there is sufficient experience and development to have financial indicators in which national organizations, such as NACUBO and ACE, have sufficient confidence to document and to distribute to members. These indicators are particularly adaptable to federal use since they rely primarily on federal data sources. This study identifies specific indicators, indicates the recommended source of data, and suggests a survey for the Higher Education Panel which could be used to supplement these data. There are several constraints including a typical limit of thirty responses on the HEP surveys. The suggested survey has twelve questions with a total of thirty-two requested responses. While other data may have been preferable, whenever possible, federal sources have been used.

Some indicators were suggested which have not yet appeared in the literature. These include a measure of continuing education registrations. Some institutions are using continuing education programs to supplement enrollments and to provide additional revenue. A question is also asked about student accounts receivable. This is a measure both of the quality of the asset and performance of the business and student financial aid offices.

These indicators do not measure, however, all possible actions which might be taken by an institution with fiscal problems. Deferred maintenance is not included because it would require an institutional estimate whose value would be influenced by its use. Program changes and, perhaps even more important, program offerings which are not made, are not included directly. The best surrogate which we have chosen is a

count of full-time equivalent faculty. Limited program offerings rather than institutional access often prevent students from obtaining the academic opportunities they prefer or need.

Colleges and universities have always been particularly supportive of their communities as a technical, cultural, and social resource. The proposed indicators do not measure the changes in community services which may have been particularly important to smaller communities.

The Measures

The framework we use is not complex. We believe that all institutions have resources, some of which are financial, and some of which are non-financial, such as faculty, students, administrators, and the physical plant. Financial resources are simply the value of the assets available to fund contingencies, emergencies, innovations and any of the other "blips" which appear on any institution's horizon. Financial resources provide a cushion to absorb some of the shocks which occur in any normal year. Financial resources provide the protection to allow innovation in times of crisis. Financial resources decrease the probability of failure in the face of temporary emergencies and give confidence to the other resources by assuring faculty, students and administrators of the longevity of the institution.

The more resources which an institution possesses compared to its peers, the greater its competitive advantage. It can react to stress with more confidence and can offer its "customers" more in terms of the quality of the product it provides. At a minimum level, however, some institutions may require more financial resources simply to survive. Institutions with a history of fluctuating enrollments, institutions which depend heavily on short-term or "soft" money, or institutions with relatively little budget

flexibility need a larger financial cushion just to stay above water.

Financial resource drains or increases can be traced to changes in revenues and expenses. Trends in net tuition revenue, state appropriations, private giving, grants and contracts receipts, and costs per student can all foreshadow changes in financial resources.

While balancing the budget each year is an important institutional exercise in expenditure discipline, monitoring financial resources gives perspective to where the institution is after years of deficits or surpluses. To be adequate, financial resources must grow with the budget, and to neglect their growth is to provide insufficient resources for chance events.

Not all institutions have sufficient nonfinancial resources even to begin a program of building financial resources. Many of these institutions have learned to live with the possibility that the environment will shift, and they will have insufficient resources to meet the shift and successfully respond. This is not to say that financial resources alone can make an institution responsive to change, but these resources do at least allow the institution the opportunity to experiment in the face of crisis without jeopardizing their all.

Not all institutions need high levels of financial resources. Institutions whose continued existence is guaranteed by the state, for example, need less of a cushion for other emergencies. In fact, it would seem that state institutions depend on the resource called "confidence of the people" more than any other resource. This resource has not been reduced to a statistic.

Financial Resources

In the research that led to the NACUBO/ACE workbook, several excellent proxies were found that approximated an institution's financial resource levels and trends. These proxies or statistics estimate the relative ability of the institution to take risks. For example, the statistic used to estimate long-term financial resources is the ratio of the institution's endowment market value to total operating expenses. This ratio provides a useful proxy for estimating the adequacy of the institution's capital base.

In the intermediate-term, the ratio of the sum of the fund balances for the current fund and the quasi-endowment fund to total operating expenses is used to evaluate the institution's overall available reserves.

In the short-term, the assets and the liabilities of the current fund are examined. The ratio of current fund assets to liabilities gives an indication of the immediate ability of the institution to pay its most pressing debts. Ratios below 1.0 indicate that the institution lacks sufficient current assets to pay immediate bills.

Estimated Risk

Also developed are proxies for estimating the risk exposure of the institution. The more the institution is exposed to financial risk, the greater the need for increased financial resources. For the intermediate term, the ratio of restricted income to total income and the ratio of fixed commitments, such as tenured faculty salaries and debt payments, to total revenue are used. Many restricted revenues are short-term, while tenured faculty and debt service are not. Heavy reliance on restricted revenues generally constitutes increased exposure to financial risk.

There are several proxies for short-term risk exposure. One is the ratio of short-term debt to annual revenue. This shows the institution's

relative ability to meet its commitments. The second short-term proxy is a measure of the volatility of tuition revenues as a proportion of total revenue. This proxy is computed as the difference between the highest real tuition level and the lowest real tuition level over recent years divided by total revenue for the current year.

Changes Affecting Financial Resources

Essential to the diagnosis of financial condition is the examination of the factors which cause decline or expansion of resources. Net real tuition revenue trends indicate the institution's ability to continue drawing support from students. Private gifts, government support, and endowment income as proportions of overall revenue indicate important trends in the ability of the institution to capture resources and the ability of the environment to provide this support. Finally, the pressure of cost increases and the ability of the institution to successfully manage these pressures are indicated by the trends in total real costs per student.

Changes in Nonfinancial Resources

Nonfinancial measures include continuing education and total enrollments, total number of faculty and a measure of the institution's priority for instruction.

Financial Analysis
A Structure for Indicators

Financial Resources

- Long-term:

  $\frac{\text{Endowment Market Value}}{\text{Operating Expenses}}$

- Intermediate-term:

  $\frac{\text{Available Fund Balances}}{\text{Operating Expenses}}$

- Short-term:

  $\frac{\text{Current Fund Assets}}{\text{Current Fund Liabilities}}$

Changes Affecting Financial Resources

- Net revenues from students
- Revenues from government agencies
- Current fund private gifts used
- Operating expenses per FTE student
- Accounts receivable per student revenue
- Student loan default rate
- Dormitory occupancy ratio

Estimated Risk

- Long-term:

  $\frac{\text{Fixed Commitments}}{\text{Current Fund Revenues}}$

- Intermediate-term:

  Dependence on restricted income

- Short-term:

  a. Enrollment Fluctuation

  1. Revenue impact

  2. Matriculant change

  b. $\frac{\text{Current fund liabilities}}{\text{Current fund revenues}}$

  c. Loan default status

Changes in Nonfinancial Resources

- Continuing education enrollments
- Instructional expenses per operating expenses
- FTE enrollments
- Number of Faculty

Indicator

Financial Resources

1. Endowment Market Value / Educational and General Expenses + Mandatory Transfers (E&G + MT)
2. Available Fund Balances / E&G + MT
3. Current Fund Assets / Current Fund Liabilities

Estimated Risk

4. Estimated Tenured Faculty Compensation + Annual Debt Service / Current Fund Revenues
5. Restricted Current Fund Revenues / Current Fund Revenues
6. Enrollment Income Fluctuation
7. Current Fund Liabilities / Current Fund Revenues
8. First-Time Freshmen + Transfers / Total Enrollment
9. Federal Loan Default Status

Changes Affecting Financial Resources

10. Net Revenues from Students
11. Support from Government Agencies
12. Current Fund Private Giving
13. Endowment Income
14. E&G + MT / Student FTE (full-time equivalents)
15. Student Accounts Receivable
16. Student Loan Default Rate
17. Dormitory Occupancy Ratio

Changes in Nonfinancial Resources

18. Continuing Education Enrollments
19. Instructional Expenses / Operating Expenses
20. FTE Student Enrollments
21. Number of FTE faculty

Meaning And Limitations Of Each Indicator

Category: Financial Resources, long-term

Statistic:

$$\frac{\text{Endowment Market Value}}{\text{Educational and General Expenses and Mandatory Transfers}}$$

Meaning:

This indicator shows the financial resources which can be used over the long term to give the institution a competitive advantage. Income from endowment may be used to provide a net price discount to students, a quality bonus to the educational program or both.

Limitations:

The endowment market value does not net out liabilities attached to endowment assets, and does not always accurately reflect the earning potential of these assets. Further, many other factors may effectively negate the value of the resource over the long run including heavy debt service schedules, income restrictions, high endowment payout policies or poor budgeting discipline.

Category: Financial Resources, intermediate-term

Statistic:

$$\frac{\text{Current Fund Balance and Quasi-Endowment Fund Balance}}{\text{Educational and General Expenses and Mandatory Transfers}}$$

Meaning:

This indicator shows the relative amount of financial resources available to respond to a crisis which might last one to three years. In a sense, the resulting fraction is the percentage of a year which reserves could be used to keep the institution going if all other income sources disappeared. Brief and experimental innovations could be funded from these resources.

Limitations:

Not all the assets of these two funds are sufficiently liquid to be useful even over a two or three year period. On the other hand, to the extent that funds are uncommitted in the unexpended plant fund, this indicator understates usable resources. Allocating between the quasi- and the regular endowment fund balances is often difficult, expecially with regard to realized gains and losses.

Category: Financial Resources, short term

Statistic: $\frac{\text{Current Fund Assets}}{\text{Current Fund Liabilities}}$ (Current Fund Ratio)

Meaning:

This indicator shows the coverage which the institution's most liquid assets have of debts which will be due within one year. When this ratio is below one, it is clear that the institution must depend on a flow of cash from its current operations to stay ahead of its creditors. Because many current fund assets like student accounts receivable may not be liquid enough to pay these kinds of debts, ratios above one may be recommended. Institutions with an insufficient level of current fund assets, or short-term financial resources, will be most strongly affected by immediate changes in the environment which require action.

Limitations:

Institutions have been known to survive pressing financial crises with insufficient current assets by selling land, selling quasi-endowment assets and by refinancing current debt with long-term notes guaranteed by previously unpledged assets (often not without some expense to its reputation or to the value of the assets.) This statistic also varies somewhat depending on the time of year in which it is calculated.

Category: The Need for Financial Resources, Estimated Risk, long-term

Statistic: Fixed Proportion of the BUdget

$$\frac{\text{Estimated Tenured Faculty Compensation + Annual Debt Service}}{\text{Current Fund Revenues}}$$

Meaning:

This ratio indicates the proportion of current fund revenues which go to costs over which the institution has the least discretion. Although it is possible to reduce the costs in either of these areas, such actions are drastic and can damage the reputation of the institution. The less flexibility an institution has in the management of its budgeted expenses, the more financial resources it needs to cushion possible shocks. Institutions with limited control over expenses, faced with revenue declines, need a longer time to adjust and hence need larger reserves to protect them during the decline.

Limitations:

Institutions have many other fixed costs and semi-fixed costs than the ones listed. These costs were selected only because of the trauma involved in taking actions to reduce them. The calculated ratios give a very understated picture of the fixed cost exposure of the institution.

Category: The Need for Financial Resources, Estimated Risk, intermediate-term

Statistic: Proportion of Revenues Which Are Restricted

$$\frac{\text{Restricted Current Fund Revenues}}{\text{Total Current Fund Revenues}}$$

Meaning:

The risk of discontinuation of restricted revenues is somewhat higher than the risk of discontinuation of unrestricted revenues. Many of the restrictions are for projects of fixed duration; these revenues may then cease. The more an institution depends on restricted revenues, the more of a cushion it may need to smooth over gaps between funded projects.

Limitations:

Some restricted revenues may be more dependable than some unrestricted revenues. Also, there are other ways to absorb the distress caused by the completion of a project, for example, making sure all expenditures (including salary costs) cease at the completion of the project. To the extent that institutions commit themselves to restricted projects with firm completion dates and no carryover expenditures, this statistic overstates the risk.

Category: The Need For Financial Resources, Estimated Risk, short-term

Statistic: Revenue Fluctuations

Dollar Difference Between the Highest and Lowest Net Tuition Revenue as a Proportion of the Current Budget (using constant dollars)

Meaning:

The greater the swing in revenue from this source in the past, the greater the probability of continued fluctuations. Both growth and decline require extra financial resources to finance the adjustments.

Limitations:

Steady growth must be interpreted differently than declines or fluctuations. While growth does generally take additional financing, and enrollment growth is often difficult to sustain (those last one hundred students are the hardest to hang on to), growth is still easier to manage than decline.

Category: The Need For Financial Resources, Estimated Risk, short-term

Statistic: $\frac{\text{Current Fund Liabilities}}{\text{Current Fund Revenues}}$

Meaning:

The short-term debt load indicates the potential drain on institutional revenues should payment be demanded on these notes and other liabilities.

By casting this statistic in terms of the size of the budget, an indication is given of the risk to institutional operations because of problems with unsecured debt.

Limitations:

The size of the debt can vary greatly with the time of the year and the time when tuition collections and federal fund collections are made. The use of short-term liabilities by state institutions is rare. This statistic does not take into consideration the amount or kind of assets possessed by the institution.

Category: The Need For Financial Resources, Estimated Risk, Prediction

Statistic: $\frac{\text{First-time freshman plus Transfers}}{\text{Total FTE Enrollments}}$

Meaning:

This is an indicator of future success or trouble caused by downturns in enrollment. Schools may have many kinds of problems with enrollments, but the anticipated decline in potential students of the traditional college age will show up most strongly in declines of first-time students at the institution.

Limitations:

This indicator can only be used in comparisons with previous amounts. There are no norms for "good" proportions of first-time students. This indicator will also look "good" for schools with attrition problems who continue to attract first-time students. Also, institutions which show a negative trend on this indicator may be successfully upgrading their quality.

Category: The Need For Financial Resources, Estimated Risk

Statistic: Perceived Financial Pressure

Loan Default Status, federal

Sinking Fund Requirement Status

Meaning:

When an institution is unable to pay debt service requirements or to keep up sinking fund payments, it is in effect declaring itself under extreme financial duress. This simple "yes/no" measure is an excellent indicator of self-assessed financial exigency.

Limitations:

Few institutions have currently asked for a moratorium on debt service requirements or are in actual default. Thus, the indicator is limited by the small extent of its application. The indicator does not show the degree of financial distress, only that the institution has chosen this perticular, extreme, mode of temporarily alleviating its problems.

Category: Changes Affecting Financial Resources

Statistic: Net Revenues From Students

Tutition and Fees plus Auxiliary Income less Unrestriced Aid deflated by the Higher Education Price Index to constant dollars

Meaning:

This important indicator is in part a predictor of changes in financial and nonfinancial resources. After deducting unrestricted student aid grants, a measure of direct support from students is derived. Even though enrollments may be increasing, heavy financial aid subsidies or below-inflation tuition increases may actually be allowing a decline in support from students. For independent institutions, support from students is extremely important. Because inflation is taken out in the calculation, 0% increases would indicate that the institution is staying even.

Limitations:

This statistic does not allow for the replacement of student-derived revenues by revenues from other sources. Thus, institutions which have successfully raised restricted gift income for student scholarships to reduce the cost to students will show a negative rate of increase in net revenue from students. Given the goal to reduce the student's burden, this "negative" indicator may in fact be positive.

This indicator is a complex mixture of many potential changes: enrollment changes, tuition changes, housing occupancy changes, and unrestricted student aid policy changes. Further analysis must be done to make sense of any trends revealed.

Category: Changes Affecting Financial Resources

Statistic: Support from Government Agencies

Meaning:

Tracing changes in government support is another way to attempt to predict future declines or improvements in institutional resource levels.

Limitations:

Because of the relatively low level of governmental support for many institutions, small changes in absolute levels of support may cause larger percentage increases.

Category: Changes Affecting Financial Resources

Statistic: Current Fund Private Giving

Meaning:

This is an improtant source of financial resources. Changes in this figure are an important diagnostic for estimating the success of the institution's fund-raising program.

Limitations:

The large fluctuations that are normal in this statistic make analysis very difficult. It is important for the analyst to try and discern general trends. Sometimes it is helpful to remove any large nonrecurring gifts to better understand underlying trends.

A further problem for analysis exists because this indicator sums restricted and unrestricted gifts together, even though restricted gifts are counted only as they are used. A separate analysis for each may be more revealing of important trends.

Category: Changes Affecting Financial Resources

Statistic: Endowment Income

Meaning:

The interpretation of this statistic is similar to the interpretation of the private gifts statistic.

Limitations:

It is difficult to interpret this statistic, given its stock market dependence. Analysis of endowment performance is a complex affair and analysts are referred to NACUBO's Comparative Performance Study.

Category: Changes Affecting Financial Resources

Statistic: Deflated Costs Per Student

$$\frac{\text{E\&G + MT}}{\text{Student FTE}}$$

Meaning:

Large increases in real costs per student indicate the institution's difficulty in combating the combined forces of increasing costs and declining enrollments. Unless revenues can be increased on a per student basis to keep up with costs, institutional resources will decline.

Limitations:

Increases in quality will look the same as cost control difficulties. Clearly this statistic should be interpreted within the context of the objectives of the institution.

Category: Changes Affecting Financial Resources

Statistic:

$$\frac{\text{Student Accounts Receivable}}{\text{Total Student Revenue}}$$

Meaning:

This indicator shows shows the change in the ability of the institution to draw revenue from students as it is due. As this indicator increases, a growing proportion of student billings is becomming uncollectible. This indicates a change in administrative effectiveness and a decrease in the liquidity of current assets used in other indicators.

Limitations:

Slow collection of accounts receivable is occasionally used as a form of student financial aid. An institution which is changing its clientele might be expected to find this ratio changing. Comparisons among institutions on this indicator are very difficult because of the timing of summer billings and collectons. However, since this indicator is given for the end of the fiscal year, fall billings and early collections for fall are normally not included under standard accounting practice.

Category: Changes Affecting Financial Resources

Statistic: Student Loan Default Rate

Meaning:

This is an indicator of both the institution's financial management depth and its ability to maintain contact with its graduates. Weakness in either of these areas can be particularly harmful to institutions facing a period of financial duress.

Limitations:

General economic conditions in the area around the institution may have an affect on this indicator. To ascribe all changes in this indicator to changes within the institution would be wrong.

Category: Changes Affecting Financial Resources

Statistic: Dormitory Occupancy Ratio

Meaning:

Dormitories represent heavy fixed cost responsibilities to many institutions. Unfilled dormitories usually indicate that revenue normally available for educational and general purposes is being used to cover the fixed expenses of the dormitories. Also, this indicator should correlate well with overall unused capacity on campus. Unused capacity means that fixed costs must be spread to a smaller base, usually indicating a finanncially distressful situation.

Limitations:

Revenue shortfalls may be assumed by agencies outside of the institution, including separate state-run dormitory authorities. This statistic does not adjust for the proportion of the current fund which is dedicated to dormitory expenditures, and a low occupancy ratio may not be very important to an institution with very few dormitory spaces.

Category: Changes in Nonfinancial Resources

Statistic: Continuing Education Enrollments

Meaning:

Continuing education enrollments show the institution's relationship to the immediate community. The stronger the ties, the higher the enrollments. Changes in this number indicate changes in an important resource.

Limitations:

There is no common denominator for noncredit course enrollments. Credits are by definition ignored, as are standard course lengths and meeting arrangements. This has lead to a difficult problem with regard to comparisons among institutions and even within the same institution over time.

Category: Changes in Nonfinancial Resources

Statistic: $\frac{\text{Instructional Expenses}}{\text{E\&G + MT}}$

Meaning:

Instruction is an important resource of the institution. If financial pressures force down the proportion of budget spent on instruction, then this resource is being sacrificed to other pressures. Many colleges and universities are being forced to put more emphasis on student recruitment, fund-raising and utilities budgets. Student financial aid is also taking a larger proportion of revenues. To the extent that the instructional program is forced to grow more slowly than the rest of the budget, instruction is receiving a smaller portion of total resources.

Limitations:

Some new budget items are specifically funded by external sources, causing the appearance of decline to instruction. The best example of this is increased federal financial aid channeled through the college's budget. The institution's emphasis on instruction may not in fact be declining; the institution may simply be carrying out the mission of an external agency in addition to its historic mission.

Category: Changes in Nonfinancial Resources

Statistic: Full-time Equivalent Student Enrollments

Meaning:

The number of students being served by the institution is an important indicator of the institution's investment in this basic resource.

Limitations:

Declines in this number do not necessarily indicate institutional decline. The institution may be choosing to upgrade the quality of its matriculants at a sacrifice to the total quantity of matriculants.

Category: Changes in Nonfinancial Resources

Statistic: Full-time Equivalent Faculty

Meaning:

Program cutbacks are almost immediately reflected in the numbers of faculty. To the extent that faculty are not duplicates of each other, each reduction in faculty reduces student choice and options for varied studies. The faculty as a resource are primary to the institution.

Limitations:

Some faculty reductions may be undertaken with no effective reduction in student academic opportunities.

Data Needs Requiring a HEP Survey

This section describes the institutional data sources and the definitions of the elements required by the survey.

Appendix C lists each statistic, the data elements needed, and their source. Appendix D gives the data elements needed specifically from the HEP survey. A discussion of each item follows.

Current fund assets and current fund liabilities are standard annual financial report items. For the HEP survey current fund liabilities should not include restricted reserves or fund balances.

Annual debt service amounts are usually available from the annual financial report. They can usually be calculated by summing current fund mandatory transfers and adding in other nonmandatory amounts paid for debt service listed in various fund accounts.

The fund balance for quasi-endowment, or funds-functioning-as-endowment, may not appear separately on the annual financial report, although this is the exception rather than the rule. The fiduciary responsibilities of institutions require records for investment funds where the principal is to be held in perpetuity to be separated from other investment funds (quasi-endowment) where no such restriction is attached. Occasionally institutions separate fund reserves from fund balances. These two items should be combined when responding to the survey.

Continuing education enrollments are usually separated from graduate and undergraduate enrollments as "other." We are interested in a full year count of those who participated as "other."

Transfer student enrollments are new students who have been enrolled at other institutions, have transferred credits and have not been previously enrolled in this institution.

Estimated tenured faculty compensation including fringe benefits can be computed directly by adding up all the salaries of tenured faculty members (and adding on an average fringe benefit amount) or by applying the fraction of faculty who are tenured to the total faculty compensation amount.

Student accounts receivable is given in the end-of-the-fiscal-year audit report. For the audit, fall billings and credit amounts are removed from the accounts receivable balance.

Dormitory occupancy (percent of capacity) is often found in the audit report. Most dormitory bonds require that this statistic be available.

Federally guaranteed loan defaults, including HEW and HUD notes, are always noted in the annual fiscal report.

Defaults on sinking fund requirements are always noted in the audit report.

Notes on the Cover Letter

Particular attention should be paid to the justification given in the cover letter for the HEP survey. Many of the comments from interested researchers, when asked about the potential for such a survey, warned that many institutions would find this type of research threatening. These letters are included in Appendix E. No lists ranking institutions by supposed degree of financial health should be published. Promising this may do much to garner cooperation. No invidious comparisons should be derived between essentially noncomparable sectors. For example, no comparison of the health of public and private institutions should be drawn from the data.

We believe that direct aid to institutions is the main issue of this research, and this should be openly stated in the cover letter. Honesty may promote a better response. Also, institutions may have no other incentive for filling out the questionnaire than the need for some comparative data. If this need is the only motivation for returning the form, then bias is possible because the response will be only from those institutions who assume

that they will look good. The importance of this survey to federal policy-making should be emphasized.

Perhaps a special insert with a request for the data from a high ranking respected individual might be helpful. Should the survey come to fruition, the authors offer their assistance in drafting a final letter.

One further note on data is necessary. The data called for in the HEP survey is the most recent possible. Matching HEGIS data is not available. Some consideration for special arrangements with NCES should be considered, including xeroxing and special coding of HEGIS forms for the sample institutions as the forms come in. The technique has been successful on one occasion in the past, but necessary editing would become the responsibility of the analyzing organization, and this could be quite a burden.

One final caveat on the use of the HEP survey. The low sampling level of small private colleges may require attempts to generate other sources of data, or may require a special (and perhaps costly) appeal to these participants in order to improve the response rate.

Instructions to include with HEP survey

Note: Data for every other year is being requested.

Item	
1	Use total current fund assets as listed in audited financial statements at the end of fiscal year. Include amounts due from other funds.
2	Use total current fund liabilities as in Item 1. Do not include fund balances or reserves. Do include amounts due to other funds.
3	Include both interest and principal payments regardless of the fund making the payments. Do not include inter-fund transfers of interest or principal.
4	Quasi-endowment funds should include funds functioning as endowment without restrictions on principal payout.
5	Include noncredit enrollments for students not included on the HEGIS opening fall enrollment report. This number should be a count of the unduplicated number of students enrolling in not-for-credit courses during the year.
6	Include students attending the institution for the first time, who are not first-time freshmen.
7	Include only completed applications. Do not include inquiries.
8	Compute by either of two methods: a) Sum all tenured faculty salaries and add an appropriate amount for benefits b) Multiply the total faculty salaries and benefits by the percentage of tenured faculty to all faculty.
9	To find the full-time equivalent number for any part-time faculty member divide that faculty member's load (in contact or course hours) by the institution's expected full-time load.
10	Use the audited end-of-year amount. Billings for terms or semesters not yet begun and credit accounts should not be included in the audited amount.
11	This amount should be the percentage of all living spaces normally rented to students which are occupied for fall semester or term.
12	Indicate if any loan payments due HEW or HUD were not paid in fiscal year 1978-79.
13	Indicate if any payments due sinking funds were not paid in fiscal year 1978-79.

APPENDIX A

Specific Indicators of Financial Health Researchers

Rate of Inflow

Enrollment trends:	Jellema, Lanier/Andersen, Jenny, Pa., McNamee, Lupton, Coldren, Minter, Anderson
Enrollments under 500	VPI

Rate of Inflow

Revenue Trends

Overall Income Trends:	Jellema, Coldren
Specific Income Item Trends:	Jellema, VPI, Pa.,
Tuition and Fees per Student:	Lanier/Andersen, VPI, Coldren
Revenue per Student:	Minter
"Revenue Draw Power":	Collier
Tuition income plus other student payments less unrestricted student aid:	Jenny
Endowment Use:	Farmer

Rate of Inflow

Revenue Mix

Tuition and Fees/Education and General Revenue (E & G Revenue): Lanier/Andersen, NACUBO, McNamee, VPI

Endowment Earnings/ E & G Revenue: NACUBO, Lupton

Changes in Financial Resources

Numbers and percentage of deficits:	Lanier/Andersen
Liquid Assets/Deficit or surplus:	Jellema
Increase in endowment funds:	NACUBO, Jenny, Farmer
Average of the net increases for the year across all five fund groups:	Collier, Jenny, Wormley, Coldren

Total Assets / Total Liabilities: Minter, Pa.

Liquid Assets / Current Liabilities: Jenny, Minter, Anderson

Current Fund Deficit / Current Fund Income: Farmer, McNamee, Minter, Wormley

Long-term Debt / Total Income: McNamee

Long-term Debt / Endowment: McNamee

Deficit / Endowment: McNamee

E & G Revenue / E & G Expense: VPI

Current Fund Revenues / Current Fund Expenditures: Lupton, VPI, Pa., Coldren

Housing & Food Revenue / Housing & Food Expense: VPI

Student Aid Expense / Student Aid Revenue: VPI

Auxiliary Enterprise Revenue / Auxiliary Enterprise Expense: VPI

Current Fund Balance / Student: Coldren

Endowment / Student: VPI, Minter, Coldren

Assets / Student (FTE): Minter

Net Assets / Total Assets Less Interfund Borrowing: Pa

Surplus or Deficit / Student: Anderson

Net Worth / FTE Faculty: Coldren

Changes in Nonfinancial Resources

Student Characteristics

Full time equivalent students / Headcount: Farmer, Coldren

Percentage in-state: McNamee

Graduate Students / Undergraduates: Lupton, Coldren

Freshman / Undergraduate Degree Lupton, Coldren

Bachelors Degrees / All Full time equivalents: Coldren

Nonfinancial Resources

Faculty Salaries

Trends in Faculty Salaries: NACUBO, Coldren, Minter

Student / Faculty Ratio

Student to Faculty Ratio: Jellema, Anderson, Coldren

Nonfinancial Resources

Phisical Plant Changes

Current Fund Revenues / Plant Assets: Lupton

Plant Assets / FTE Student: Lupton, Coldren

O&M Expense / Plant Assets: Anderson

Nonfinancial Resources

Other Resources

Student Loan Delinquencies: Jenny

Dorm Occupancy: Coldren

Changes In Financial Resource Needs (Risks)

A measure of the institution's closeness to an optimum Revenue Distribution: Collier

Plant Debt / Plant Assets: Collier

Relative Endowment Yield: Collier, Jenny

Short-term Loans / Total Expenses: Collier, Anderson (or total income)

Interest Expense / Total Expenses: Collier

"Revenue Stability": Collier

Unrestricted Revenue / Total Revenue: Collier

Tenured Faculty Salary + O&M Expenses / Total Expense: Collier

Plant Investment / Plant Liabilities: Jenny

Interest and Debt Repayment / Student Net Revenues (or plus Auxilliary Income): Jenny

Debt Payment Per Student: Farmer

Debt Per Student: Farmer

Fund Balance Per Student: Anderson

E&G Revenues / Fixed Operating Costs: Lupton

Plant Debt Payments Per Plant Debt Ending Balances: VPI

Debt/Fund Balance: Anderson

Debt/Current Fund Income: Anderson

Principal and Interest / Curent Fund Income: Anderson

Rates of Outflow

Rate of Expenditure Change

Expenditures Per Student: Jellema, Lanier/Andersen, Farmer, VPI

Total Expenditures: Lupton, Wormley, Anderson

E&G Expense Per Total Degrees Conferred: Lupton

Expenditure Mix

Libraries/Education and General Expense (E&G): Lanier/Andersen, NACUBO, VPI

Plant Addition Expenditures: Lupton

O&M/E&G: Lanier/Andersen, NACUBO, VPI

Administrative Expense/E&G: Lanier/Andersen, NACUBO

Net Cost Student Aid/E&G Revenue: NACUBO

Net Cost of Student Aid/Tuition Revenue: NACUBO, Anderson

Instruction/E&G: NACUBO, Lupton, VPI, Coldren

Student Services/ E&G: NACUBO

APPENDIX B

References

This is a list of the financial indicator research publications discussed in this monograph. While it is not comprehensive, most of the best studies are covered. Researchers interested in a more complete history are referred to Paul Brubaker's A Review of the Development and and Use of Financial Indicators for Colleges and Universities: A Literature Review and Synthesis (American Institutes for Research: Palo Alto, California, 1979).

The primary basis for the organization of the statistics and the statistics themselves is also documented in "Self-Assessment of Financial Condition: A Preliminary Edition of a Workbook For Small Independent Institutions," by Nathan Dickmeyer and K. Scott Hughes published by the National Association of College and University Business Officers and the American Council on Education, June, 1979, Washington, D.C.

ABBREVIATION	REFERENCE
Anderson	Anderson, Richard E. Strategic Policy Changes at Private Colleges. Teachers College Press: New York, 1977.
VPI	Andrew, Loyd P. & Burton D. Friedman. Final Report, A Study of the Causes for the Demise of Certain Small, Private, Liberal Arts Colleges in the United States, Virginia Polytechnic Institute & State University: Blacksburg, Va., May, 1976.
Coldren	Coldren, Sharon L. and Others. ACE/NCES Experimental Project on Financial Health Indicators Using HEGIS Data. ACE: Washington, D. C. 1979.
Collier	Collier, Douglas J. and Patrick, Cathleen. A Multivariate Approach to the Analysis of Institutional Financial Condition. NCHEMS: Boulder, 1978.
Farmer	Farmer, James. Financial Health of Independent Colleges and Universities in New York. Temporary State Commission on the Future of Postsecondary Education: Albany, 1977.
Jenny	Jenny, Hans. The Bottom Line. Unpublished paper, 1978.
Jellema	Jellema, William W. From Red to Black. Jossey-Bass: San Francisco, 1973.
Lanier,	Lanier, Lyle H. and Charles J. Andersen. A Study of the Financial Condition of Colleges and Universities: 1972-1975. ACE: Washington, D. C. 1975.
Lupton	Lupton, Andrew H., John Augenblink, and Jospeh Hoyison. The Financial State of Higher Education. Chance Magazine, Vol. 8, Num. 8. (September 1976): 20-35.
McNamee,	McNamee, George C., Edward J. Gibson, and Geoffrey S. Ballard. Dormitory Authority of the State of New York, Research Report. First Albany Corporation: Albany, New York, November, 1975.
Pa.	Minter, John, and John Minter Associates. Financial Condition of Independent Colleges and Universities in Pennsylvania. Commission For Independent Colleges and Universities in Pennsylvania, 1977.
Minter	Minter, John W. and Howard R. Bowen. Independent Higher Education. Fourth Annual

Report on Financial and Educational Trends in the Independent Sector of American Higher Education 1978. National Association of Independent Colleges and Universities: Washington, D. C., 1978.

NACUBO — The Sixty College Study...A Second Look. NACUBO: Washington, D. C. 1960.

Wormley — Wormley, Wayne M. Factors Related to the Ability of Certain Small, Private, Liberal Arts Colleges to Cope with the New Depression in Higher Education. Unpublished Ph.D. Dissertation, Stanford University: Stanford, Calif. May, 1978.

APPENDIX C

REQUIRED DATA ELEMENTS AND SOURCE

Financial Strength		
1.	Endowment Market Value	HEGIS FIN E6 c2
	Educational and General Expenses + Mandatory Transfer (E&G + MT)	HEGIS FIN B12
2.	Current Fund Balance	HEGIS FIN F6 c1 + c2
	Quasi-Endowment Fund Balance	HEP 4
	E&G + MT	HEGIS FIN B12
3.	Current Fund Assets	HEP 1
	Current Fund Liabilities	HEP 2
Estimated Risk		
4.	Estimated Tenured Faculty Compensation	HEP 7
	Annual Debt Service	HEP 3
	Current Fund Revenues	HEGIS FIN A20
5.	Restricted Current Fund Revenues	HEGIS FIN A6 + A8 + A10 A12 + 14
	Current Fund Revenues	HEGIS FIN A20
6.	Tuition and Fees	HEGIS FIN A1
	Housing and Food Service (Auxilliary Enterprises)	HEGIS FIN A16
	Unrestricted Student Aid Grants	HEGIS FIN B9
	Higher Education Price Index	Table
	E&G + MT	HEGIS FIN B12
7.	Current Fund Liabilities	HEP 2
	Current Fund Revenues	HEGIS FIN A20
8.	First Time Freshman	FECR Card c6
	Transfers	HEP 6
9.	Defaults, Federally Guaranteed Loans (Yes or No)	HEP 11
	Defaults, Sinking Fund (Yes or No)	HEP 12
	Total Enrollment	FECR Summary 29 c13 + c14

Changes Effecting Financial Resources

10.	Tuition and Fees	HEGIS FIN A1
	Housing and Food Service (Auxiliary Enterprises)	HEGIS FIN A16
	Unrestricted Student Aid Grants	HEGIS FIN B9
	Higher Education Price Index	Table
11.	Government Appropriations, Federal	HEGIS FIN A2
	Government Appropriations, State	HEGIS FIN A3
	Government Appropriations, Local	HEGIS FIN A4
	Current Fund Revenues	HEGIS FIN A20
12.	Current Fund Private Gifts, Grants, Contracts	HEGIS FIN A11 + A12
	Current Fund Revenues	HEGIS FIN A20
13.	Endowment Income	HEGIS FIN A13
	Current Fund Revenues	HEGIS FIN A20
14.	E&G + MT	HEGIS FIN B12
	Total Enrollment, FTE	FECR Summary 14 c13 + c14 + 28 c15
	Higher Education Price Index	Table
15.	Student Accounts Receivable	HEP 9
	Tuition and Fees	HEGIS FIN A1
	Housing and Food Service (Auxiliary Enterprises)	HEGIS FIN A16
16.	Student Loan Defaults	U.S.O.E. FISOP 2C058CA ÷ 2C010CA
17.	Dormitory Occupancy Ratio	HEP 10

Changes in Nonfinancial Resources

18.	Continuing Education Enrollments	HEP 5
19.	Instruction Expenses	HEGIS FIN B1
	E&G MT	HEGIS FIN B12

20.	Total Enrollment Fall, FTE	FECR Summary 14 c13 + c14 + 28 C15
21.	Number of Faculty -- Full-time	HEGIS ST & FB 1,7 c1 + c5 + 1,14 c1 + C5
	Part-time	HEP 8

DATA SOURCES

REGIS FECR — Department of Health, Education and Welfare, Higher Education General Information Survey, Fall Enrollment and Compliance Report of Institutions of Higher Education, 1978.

HEGIS FIN — Department of Health, Education and Welfare, Higher Education General Information Survey, Financial Statistics of Institutions of Higher Education for Fiscal Year 1978.

HEGIS STBF — Department of Health, Education and Welfare, Higher Education General Information Survey, Salaries, Tenure, and Fringe Benefits of Full-time Instructional Faculty, 1978-79.

HEGIS IC — Department of Health, Education and Welfare, Higher Education General Information Survey, Institutional Characteristics of Colleges and Universities, 1978-79.

HEGIS DOFA — Department of Health, Education and Welfare, Higher Education General Information Survey, Degrees and Other Formal Awards Conferred Between July 1, 1977 and June 30, 1978.

USOE FISOP — Department of Health, Education and Welfare, Institutional Fiscal Operations Report for the National Direct Student Loan, Supplemental Educational Opportunity Grants, and College Work-Study Programs for the 1976-77 Award Period.

APPENDIX D

PROPOSED HIGHER EDUCATION PANEL SURVEY

	1976-77	1977-78	1978-79
Financial			
1. Current Fund Assets	_____	_____	_____
2. Current Fund Liabilities	_____	_____	_____
3. Annual Debt Service Payments (all funds)	_____	_____	_____
4. Fund Balance, Quasi-endowment	_____	_____	_____
Enrollments			
5. Continuing Education Enrollments	_____	_____	_____
6. Matriculations, Transfer Students	_____	_____	_____
Faculty			
7. Estimated Tenured Faculty Compensation (include fringe benefits)	_____	_____	_____
8. Part-time Faculty, full-time Equivalents	_____	_____	_____
Student Receivables			
9. Student Accounts Receivable (at end of fiscal year, not including fall billings or credit accounts)	_____	_____	_____
Auxiliary Enterprises			
10. Dormitory Occupancy (percent of capacity) fall	_____	_____	_____
Loan Defaults			
11. Federally Guaranteed including HEW and HUD (any--yes/no)			_____
12. Sinking fund defaults (any--yes/no)			_____

APPENDIX E

Correspondence with National Higher
Education Financial Health Experts
Regarding the Proposed HEP Survey

AMERICAN COUNCIL ON EDUCATION
ONE DUPONT CIRCLE
WASHINGTON, D. C. 20036

ECONOMICS AND FINANCE UNIT

Dear Colleague:

Sal Corrallo at the Office of Education has asked me to help him design a questionnaire for a Higher Education Panel survey which will be used to assess "institutional financial distress". I frankly don't think it can be done, any more than we can currently assess the earnings potential of a private company's common stock -- we can knock it around a bit, but we can only approximate the "truth".

Nonetheless, I think I have learned a few things from you and the participants at the last two Annapolis conferences on assessing institutional financial health, and I would like to try my hand at extending the state-of-the-art in this area with the cooperation and resources of the Higher Education Panel and the Office of Education.

I have explained to Sal what I believe are the major constraints of any effort to measure financial distress. The first is that it is extremely difficult to predict the demise of any given institution. The best that we can hope to do is to assess a relative probability of failure, and then only a probability that extends to groups of institutions. As an example of the difficulties we have in making accurate predictions, the closer an institution is to failure, the more appealing it becomes to the kind of talented individual who can come in and turn the institution around. These people tend to ruin some of our best predictions. Nonetheless, we can improve our ability to recongize institutions in various states of "inadequate preparation for the future". Institutions without sufficient resources to survive the kinds of contingencies and emergencies which we all know are normal to higher education, are simply more likely to fail -- the wrong emergency at the wrong time and they are in severe trouble.

The key word for analysis in the above paragraph is resources. In order to make intelligent statements about changes in the probability of institutional survival, we need to be able to measure changes in institutional resources: financial, faculty, administrative, student and physical. Financial resources are particularly suited to our need to monitor changes in the probability of demise, because they tend to respond (or are used to respond) to crises more immediately than the nonfinancial resources. However, the patterns of resource change used by institutions to meet exigencies varies. Any resource can come under attack during adverse times -- cash declines following deficits, low faculty salary increases, appeals to students not suited to the institution's historic mission, maintenance deferral, etc.

A major factor in an analysis of institutional financial resource changes is a careful description of the needs for these resources. Because these resources must act as buffers to protect the other institutional resources from the shocks of external revenue and expense shifts, measures of the changing size of external fluctuations are needed. If the environment is becoming more volatile, more financial resources are needed to adequately buffer the institution. Also, the less flexible which an institution can be with its resource allocations, the larger buffer it requires to allow it time to adjust to external changes without trauma.

What I propose, therefore, is a set of measures which indicate:

I. Financial resource changes

   A. Long term
   B. Intermediate term
   C. Short term

II. Nonfinancial resource changes

   A. Faculty
   B. Student
   C. Physical

III. The need for financial resources: risk exposure

   A. Long term
   B. Intermediate term
   C. Short term

IV. Predictors of resource changes

   A. Income trends
   B. Expense trends

The indicators which I propose to examine for the approximately 700 schools in the Higher Education Panel (HEP) sample follow.

Financial Resources:

1. Short term: Current Fund Ratio

$$\frac{\text{Current Fund Assets}}{\text{Current Fund Liabilities}}$$

2. Intermediate term: Reserve protection

$$\frac{\text{Current Fund Balance (including Reserves)} + \text{Quasi-endowment Fund Balance}}{\text{Current Fund Revenues}}$$

3. Long term: Endowment Size

$$\frac{\text{Endowment Fund Balance}}{\text{Current Fund Revenues}}$$

Nonfinancial Resources

1. Faculty

   Average Real[1] Faculty Salaries

2. Students

   Entering student's average test scores

3. Physical

   Size of deferred maintenance liability

Financial Resource Needs: Risk profile

1. Proportion of fixed costs (defined to include tenured faculty compensation plus annual debt service payments plus utilities (electricity, fuel, water).

$$\frac{\text{Fixed Costs}}{\text{Total Current Fund Revenue}}$$

2. Dependence on "soft" money short term restricted revenues

$$\frac{\text{Restricted Current Fund Revenues}}{\text{Total Current Fund Revenues}}$$

3. Fluctuation in appropriation and student derived income

$$\frac{\text{Highest Minus Lowest Real Appropriation}^{2}}{\text{Total Current Revenues}}$$

$$\frac{\text{Highest Minus Lowest Net Student Revenue}^{3}}{\text{Total Current Revenues}}$$

[1] Removing inflation

[2] Over the last five years

[3] Over the last five years. Net student revenue is defined as tuition and fees plus auxiliary income less financial aid from unrestricted sources.

Predictors of Resource Changes

1. Trends in net real student revenue

2. Trends in real appropriations

3. Private gifts applied as a proportion of total current fund revenue

4. Grants and contracts from all sources as a proportion of total current fund revenue

5. Total real educational and general expenditure per FTE students (to examine cost pressures and the institution's ability to adapt)

Fortunately, much of the necessary data have already been gathered and we need ask for little new information from the institutions with the HEP survey. Also, almost all of the necessary data which we must ask for can be speedily gathered from annual reports.

Given that HEGIS data covers much of this, I would only ask institutions to provide the following figures for the fiscal years ending in 1975, 1976, 1977 and 1978.

1. Current Fund Assets

2. Current Fund Liabilities

3. Current Fund Balance (including restricted and unrestricted reserves, i.e. assets minus liabilities). (I am concerned that HEGIS misses the reserves, so I will ask here also.)

4. Quasi-endowment fund balance (funds functioning as endowment). This may require some allocation, since in some cases only the assets are designated as "quasi".

5. Annual Debt Service - interest and principal repayments in all funds.

6. Annual Utilities Costs (including electricity, fuel, water and sewage).

7. Deferred Maintenance Liability

   (This is the institution's estimate of the cost of projects which were not undertaken, but which were needed to assure the continued usefulness of all buildings for their current purposes. This estimate should not include projects to improve access for the handicapped, projects to improve utility consumption, or projects to alter the use of buildings. We are seeking only to measure the <u>decline</u> of physical resources.)

Items 1 - 5 should be available directly from audit reports. Item 6 should be easily available from expense records. Item 7 will require an estimate and may not be available.

I also anticipate difficulty in getting good HEGIS data for all necessary years, but I did get excellent cooperation from NCES on the last study I did using 1978 financial data for community colleges.

The greatest difficulty we will have will be presenting any results in a clear context of meaningful explanations and caveats. Each statistic above merits at least a full chapter on caveats alone.

The true liquidity of assets is not measured...

Endowment fund balance is a poor proxie of earning power...

The need for financial resources is much different at state institutions...

Average faculty salary growth is only a modest predictor of the faculty as a resource...

Unstructured deferred maintenance estimates are poorly comparable...

I believe the major concern we all have over the effort which Sal and I propose is that the statistics will be irresponsibly presented or used in an uninformed manner. We are sensitive of the damaging impact of bald statements about the decline of institutions or sectors. Journalism being what it is, it will be difficult to prevent any improper uses. However, I will try to guard against uninformed presentation of any statistics.

Sal and I came away from the last Annapolis conference feeling that some progress had been and could continue to be made in the area of financial condition measurement. We need your reaction to the proposed survey. We will not, indeed should not, continue unless we can show to the Office of Education that some consensus does exist on the question of how to monitor changes in financial condition. We would greatly appreciate a note from you with your encouragement, reservations, insights and general comments on the framework, the indicators and the survey design.

Sincerely,

Nathan Dickmeyer
Director
Financial Measures Project

THE UNIVERSITY OF THE STATE OF NEW YORK
THE STATE EDUCATION DEPARTMENT
99 WASHINGTON AVENUE
ALBANY, NEW YORK 12230

OFFICE OF POSTSECONDARY RESEARCH,
INFORMATION SYSTEMS AND INSTITUTIONAL AID
518: 474-5091

May 23, 1979

Mr. Nathan Dickmeyer
Director, Financial Measures Project
American Council on Education
One DuPont Circle
Washington, D.C. 20036

Dear Nate:

This is in response to your letter of May 15 concerning the design of a questionnaire to assess "institutional financial distress". I have a number of thoughts on the subject:

1. I am quite confident that using a relatively small set of data on an institution it is possible to determine whether it is having problems. I do not believe that one can determine from a paper review alone whether closure is imminent.

2. Your list of variables will do reasonably well as the basis for a screening process. Because some institutions experience significant fluctuations from year to year, your plan to have four years' data in your profile is a good one.

3. Entering students' test scores are not universally available.

4. Your data set will involve a lot of analysis, either by you or by the institution (e.g., deferred maintenance liability). It also implies a relatively large set of data elements to be used in constructing the final indicators.

If I represented an institution, particularly one in financial trouble, I doubt I would respond to your survey. Such a project is going to raise awareness levels, etc. and ultimately make it more difficult for me to operate. I will get more probing questions. My situation is more likely to become common knowledge. I already know

what my condition is, and your project is not going to help me deal with any problems I may have. I see nothing in this project for the institutions.

I guess my bottom line at present is that, unless you can establish a larger frame of reference that holds out the hope of additional assistance to institutions, financial or informational, or both, that you will have trouble selling it. Even if you do get cooperation, I 'm not sure what progress will have been made if you are just able to indicate that X percent of institutions of different types are having different types of problems.

Your project might also provide a basis for a "Moody's-style" rating service in which the status of all institutions is made public for all to see. This may in fact be a very good thing, but I'm not sure we're ready for it. And I know there would be trauma involved in getting there.

I hope these thoughts are helpful. I'd be happy to discuss this further at your convenience.

Sincerely,

Paul Wing
Coordinator

PW/js
cc: Dorothy G. Harrison

AMERICAN COUNCIL ON EDUCATION
ONE DUPONT CIRCLE
WASHINGTON, D. C. 20036

OFFICE OF THE VICE-PRESIDENT

TO: NATE DICKMEYER

FROM: BOB ATWELL

DATE: MAY 30, 1979

These are just a few thoughts in response to your May 15 memo concerning the possible HEP survey on financial distress.

The HEP sample is biased toward the research universities and that may prove troublesome since they are generally not as distressed as the smaller privates. Also, I think the kind of work you have been doing is more applicable to privates than to publics.

With regard to nonfinancial resource changes, you refer to changes in the test scores. I also think you would want to look at changes in the size of the applicant pool and changes in the proportion of the pool which is offered admission. Also, one would want to know about the changing composition of total enrollment which gets at the extent to which the institution has gotten into the older student market.

I think it is a good idea to use the HEP panel in this way so I wish you well.

BA:ra

cc: Carol Van Alstyne

FISK UNIVERSITY
NASHVILLE, TENNESSEE 37203
TELEPHONE 329-8766

Office of Institutional Research and Planning

May 29, 1979

Dr. Nathan Dickmeyer, Director
Financial Measures Project
Economics and Finance Unit
American Council on Education
One Dupont Circle
Washington, DC 20036

Dear Nate:

I wanted to provide my reaction to the HEP Survey Questionnaire, before my summer work schedule picks up.

Having spent the year working on the NACUBO Steering Committee, you already know the reservations many of us have expressed about the Feds' use of and attempt to use these types of measures to assess "institutional financial distress." Corrallo's interest along these lines is particularly bothersome, but inevitable I suppose.

As for your proposed measures, I would only suggest you look at trends in your financial and non-financial resource measures, and in your measure of the proportion of fixed costs, rather than a one year snapshot. You may have intended this anyway, in light of your inclusion of the word "changes" in I. and II. on p. 2, and I'm sure you understand why I would suggest this.

There are three questions I have. First, what is the "fluctuation in appropriation and student derived income" measure supposed to show? Wouldn't it be just as useful and possibly more straightforward to look at the trend in the real appropriation and net student revenues?

Secondly, would you clarify your comment pertaining to Quasi-endowment fund balances (p. 4, #4)? What point are you making in your statement: "This may require some allocation, since in some cases only the assets are designated as 'quasi'." Also, I agree with you that it will be difficult to measure the deferred maintenance liability.

My third question is, after you have examined these indicators for the 700 institutions, how will you decide what institutions are in financial distress? What will distress mean for the institutions and for the government.

Well, Nate, there really isn't much that I can add. I will rest more comfortably knowing you are working with Corrallo on this project. However,

there is little comfort in knowing of the Feds' continued interest in this area.

Sincerely,

Wayne M. Wormley
Director of Institutional Research
and Planning

WMW:jt

PATEROS AND ASSOCIATES

BARNESVILLE, MD 20705

301/972-8826

May 21, 1979

Mr. Nathan Dickmeyer
Director, Financial Measures Project
American Council on Education
One Dupont Circle
Washington, D.C. 20036

Dear Nate:

Your letter of May 15, 1979, concerning the assessment of "institutional financial distress" is very well written--particularly, with respect to your point that you don't think it can be done. I have been involved in this for a number of years for individual institutions and groups of institutions and I am constantly amazed at their capacity for survival. (Reminds me of the Bullets!)

Some of my associates and I hope to have ready for publication very soon, a document titled Higher Education Indices. Our primary caveat is that none of the indices, singly or in any combination, can predict anything definitive about the future of an institution--a conclusion I am glad that you share. Further, we feel that similarity among institutions is related more to enrollment size than any other characteristic, and that the quality of the Board of Trustees is largely ignored as a most significant factor in the performance of an institution.

I also feel that public institutions should not be included in any study such as the one proposed. The status of a public institution is primarily a political decision and rarely has anything to do with sound planning or logic.

So much for generalities; now to the indicators you suggest.

The references to Current Fund-all sections should be limited to the Unrestricted Current Fund since any balances in the Restricted Current must either be spent for specific purposes or returned to the grantor. For example, I know of one institution whose demand notes payable in the Unrestricted Current Fund are about $1.1 million, while total annual Unrestricted Current Fund Revenues are about $1.5 million. This means that it needs almost twice its normal annual unrestricted revenue as a surplus in one year to pay off prior years' deficits. Incidently, its current restricted revenues are about $1 million per year.

I would suggest adding a few items to the non-financial resources category. The student/faculty ratio, the average number of graduates per major, the number of majors with 10% or less of the total graduates, and the average credit hour production of the faculty have a great bearing on the financial stability of an institution. So too do the financial results of auxiliary enterprises, the student/total FTE employees (including faculty), and the percentage of faculty, by rank, on tenure.

In the risk profile section, I would lean toward the computation of Net Student Tuition and Fee Revenue, excluding auxiliary enterprises revenues which could contain revenue from non-students. Also, the percentage of students on financial aid of all types and the average award per student are significant indices.

Norman Brandt has revised the finance form for HEGIS XIV to request some of the data you suggest gathering. It might be well to check with him to see if you could use the same format and terminology.

You are quite correct in your reservations about an estimate of deferred maintenance costs. They will range from a complete ignoring of the problem to estimates of the cost of completely renovating and modernizing every building on campus.

I don't quite understand your point about reserves. In fund accounting, assets minus liabilities equals fund balance--rarely are reserves established, and if they are, they would probably be identified as such in a separate section, as with the liabilities.

Why do you anticipate ~~getting~~ NOT good HEGIS data? Short of going on campus and conducting an audit, it's the best that's available.

Your concern about irresponsible use of the statistics is well taken. That is our concern about our forthcoming document, even with the caveats we propose. But since people twist sports statistics to suit themselves, I'm sure that can happen to any set of statistics.

I am quite convinced that no government agency or national educational organization should come out with anything that could be construed as "standards" for financial condition of an institution. It would be better to come out with an analysis which would permit an institution to judge itself in the light of its own mission, objectives, and goals.

Let's get together soon and chat about all this.

Sincerely,

John J. Pateros

NACUBO National Association of College and University Business Officers
One Dupont Circle, Suite 510, Washington, D.C. 20036 • 202/296-2344

June 7, 1979

MEMORANDUM TO NATE DICKMEYER

SUBJECT: PROPOSED HIGHER EDUCATION PANEL SURVEY

I have a couple of points to pass on relative to the proposed survey you and Sal are putting together. As you would expect, I have little difficulty with the proposed indicators since they are virtually identical to the ones we have in the self-assessment workbook for small independent institutions. You also seem to have a good understanding of the data quality and limitations you will be experiencing, so I will not comment on that serious and troublesome aspect of the proposed project.

My concerns, or cautions, are twofold:

1) The use of the statistics for other than small independent institutions

2) The use of the statistics for purposes other than self-assessment

The statistics you and I put together with the help of the task force, and that you and Sal propose using, are imbedded in the theoretical framework we developed for small independent institutions. The framework was not designed to include the public sector nor the complex research-oriented universities. As we have discussed on previous occasions, I have difficulty seeing the relevancy of measuring "institutional financial distress" for the public sector and major research universities (MRUs) in terms of the statistics developed for small independent institutions. To me, the relevant issues regarding institutional strength in the public sector and with MRUs are related more to their success in meeting programmatic objectives.

The public sector should be examined in terms of how successfully the state (or other governmental authority) is providing postsecondary education to its citizens. This line of inquiry looks at tax capacity, demographics, enrollment patterns, affirmative action, and other service-oriented indicators. The McCoy-Halstead studies are a good example of the relevant approach to looking at the strength of public sector, postsecondary education. Current fund ratios, capital structure, endowment, and private giving patterns are examples of statistics that seem to be irrelevant and possibly misleading measures for the public sector.

The use of the statistics for MRUs have similar limitations. Examination of the public sector MRUs have all the problems described above. In addition, the complexities inherent in the sophisticated research and graduate programs for both public and independent MRUs cannot be adequately dealt with by the

set of statistics developed for small independent institutions. The more relevant issues, in my opinion, are how successfully an institution is able to support its academic programs, provide quality support services, and recruit the desired mix of undergraduate and graduate students and faculty. (As an aside, I can see an interesting line of inquiry into the analysis of the financial strength of independent MRUs where attention would be directed toward such factors as capital structure, faculty research strength, quality of laboratory and other test facilities, student aid resources, and fund-raising drawing power.)

The second point -- the use of the statistics for purposes other than self-assessment -- also causes me some difficulty. The workbook approach you and I devised with the help of the task force has a very humanistic, personal approach. The statistics are an integral part of a process designed to help presidents and business officers analyze the strengths and weaknesses of their institutions. When the statistics are pulled out of the context of the self-assessment workbook they have the strong potential of oversimplifying and misleading analysts and policy makers. One of the great successes of the workbook is the way it profiles an institution. The interrelationships that exist among an institution's resources and expenditures are what define an institution's strengths and weaknesses. In my opinion, when the statistics are examined individually for a large number of institutions, they lose much of their meaning.

I also have the added concern, and I think you do as well, that analysts and policy makers will try to make their own determination of an institution's financial strengths and weaknesses based simply on the calculated numerical values. We have to be constantly vigilant that this kind of simplistic one-dimensional analysis cannot adequately describe an institution's financial condition.

Now that I have been overly critical, let me offer something constructive. The line of inquiry you and I are using for the self-assessment workbook is, to me, the most responsible and thoughtful approach to developing means for describing institutional financial condition. That research methodology is transferable to other segments of postsecondary education. Possibly, the proposed HEP survey will give results that would indicate which segments should be analyzed next. However, I think both you and I already know what the schedule should be.

At some point in time, I would like to see a "statement of objective" for the HEP survey. Its purpose, usefulness, and how it fits into the overall research effort into indicators of financial condition. Such a statement may help me better appreciate the value of the survey.

K. Scott Hughes
Director
Financial Management Center

KSH/amc

64

cc: S. Corrallo
S. Jung
D. F. Finn
M. J. Williams, Jr.

WARTBURG COLLEGE
WAVERLY, IOWA 50677
(319) 352-1200

June 1, 1979

Dr. Nathan Dickmeyer
Director of Financial Measures Project
American Council on Education
One Dupont Circle
Washington, D. C. 20036

Dear Dr. Dickmeyer:

I should encourage you in your study of financial conditions measurement, and offer two quick comments on your proposed outline.

One, some additional information on debt service and how it is handled can help illuminate the importance of this item in an institution's health. For example, an institution that has set aside the earnings of a portion of its endowment to pay the debt service on a building is spending as much money on debt service as an institution that must raise the amount annually in gifts or through tuition, but there is a "self-amortizing" aspect in the former instance that moderates the negative impact of debt service.

Two, one of the best (in a field where all are weak) indications of academic health as it relates to fiscal well-being is the trend in library resources. To be truly helpful this should look beyond mere numbers and dollars (e. g. the quality of periodicals over against five or ten years ago, not merely changes in the number of subscriptions) but even dollar change, percentage of E and G changes, and proportion changes (between staff and materials) can be helpful.

I shall be interested in seeing the progress of your study and would appreciate being on your mailing list.

Sincerely yours,

William W. Jellema,
President

WWJ:zcl

CATHOLIC UNIVERSITY

WASHINGTON D.C. 20064

OFFICE OF THE DIRECTOR OF INFORMATION SYSTEMS AND PLANNING
202 635-5212

June 28, 1979

Dr. Nathan Dickmeyer
Director
Financial Measures Project
American Council on Education
One Dupont Circle
Washington, DC 20036

Dear Dr. Dickmeyer:

This is a belated reply to your letter of May 15 concerning the Financial Measures Project. I received your letter on May 25 and my travel schedule prevented an earlier reply.

I like the approach you are proposing and am happy to assist you and the Panel.

Some detailed comments:

1. To assure credibile data and a good rate of return, I would favor initially developing a limited questionnaire asking only for major data. You appear to have done this in your list of variables and ratios. It is preferable to obtain some credible data quickly rather than to get bogged down in second order efforts which are not overly relevant.

2. There is, as you point out, a problem in the comparability of data particularly in the area of deferred maintenance. I believe you will have to probe to obtain a credible response. For example a series of sub-questions in various physical plant areas needs to be developed which would lead to the total level of deferred maintenance. The variation of sophistication among Physical Plant Offices is great.

3. In the analysis of the data it would be important to segregate institutional responses by type, e.g., public-private, 2-year, 4-year and universities and hopefully by the Carnegie groupings if the response is sufficient to assure statistical validity.

I hope that the results of the survey will not be used to predict the demise of any institution. The data should be made available to the institutions in a cogent and coherent format so that any one institution can compare itself to others within its grouping to obtain insight and areas of possible future redirection.

An institution in perceived financial difficulty may be able to attract an outstanding turn-around manager. On the other hand many good managers may be turned off.

Sincerely yours,

Edward D. Jordan, Director
Information Systems & Planning Office

cc: Dr. Salvatore B. Corrallo
Director of Postsecondary Programs Div.

David I. Carter
Assistant to the Chancellor
for Financial Affairs

P.O. Box BT
University, Alabama 35486
Telephone (205) 348-5121

The University of Alabama System

The University of Alabama, University
The University of Alabama in Birmingham
The University of Alabama in Huntsville

May 31, 1979

Mr. Nathan Dickmeyer
Director, Financial Measures Project
American Council on Education
One Dupont Circle
Washington, D. C. 20036

Dear Nathan:

Your letter of May 15 is in hand and raises a variety of questions. Answers to those questions might clarify and simplify the task at hand. For example:

1. What point in time is being examined? Data is generally available (6 to 12 months old) that can be used to examine an institution's past health. Due to "reporting lag," an institution's present health is more difficult to evaluate. Use of past data to predict an institution's future health will require the development of an extensive conceptual framework if the predictions are to be acceptable. Inasmuch as the prediction of future health is an obvious objective, the primary mathematical tool is necessarily trend analysis, the limitations of which should be identified as early as possible.

2. What health conditions might one expect to find? Continuing in the "health" vein, one might find an institution (a) without pain, (b) in pain, (c) in unbearable pain (seeking help), or (d) dead. It may be appropriate to develop unique indicators for such categories and "matrix" them with the points in time mentioned in paragraph 1.

3. Can an institution's financial health be examined separately from its health in other areas? If not, the relationships between the various health categories should be delineated. For example, are low faculty salaries and poor educational quality always "companions"?

4. Can indicators be developed that apply meaningfully to different types of institutions? For example, can indicators be developed that apply equally to land grant universities, heavily supported research universities, and small liberal arts colleges? If not, and common indicators are used, the findings may do little more than disclose that the institutions being examined are different, which would probably be known at the outset. Is it possible to

"compartmentalize" activities so as to be able to evaluate common activities at uncommon institutions? For example, can unrestricted instructional activities be "carved out" and compared for different types of institutions?

5. Is the objective of the project to establish an approach and techniques or is it to delineate specific quantitative indicators? The former seems the much more practical of the two and would be very useful to "on-the-line" administrators.

Time spent on aspects of the sort noted above will prove well spent as the project moves along. Indeed, this type underpinning needs to be set in place before attempting to establish or evaluate detailed procedures. I encourage you to pursue this project and wish you every success with it.

Please let me know if there is any way that I can help.

Cordially,

David I. Carter

DC:mm

cc: Dr. Carol Van Alstyne

Mr. Larry Owsley, Deputy Executive Director
for Institutional Finance
Council on Higher Education
West Frankfort Office Complex
U. S. Route 127 South
Frankfort, Kentucky 40601

(Larry, I suggested to Nathan that he might wish to talk with you. Possibly you could make available to him some of Kentucky's cost data which statewide is the best in the country.)

Carnegie-Mellon University

5000 Forbes Avenue
Pittsburgh, Pennsylvania 15213
[412] 621-2600

1 August 1979

Dr. Nathan Dickmeyer
Director
Financial Measures Project
Economics and Finance Unit
American Council on Education
One DuPont Circle
Washington, D.C. 20036

Dear Dr. Dickmeyer:

My interest in your financial measures project was heightened when I recognized your name. I had seen you at the last two AIR conventions and we have used EFPM for budget planning here at the University.

I feel that your project is important for two reasons. First, we really need to have more comparative data for institutions. At a minimum I would like to compare CMU to other major research universities and ideally I would like to compare our profile to specific institutions. Second, as the financial plight of private institutions is brought to people's attention, I hope that it will exert some pressure to increase higher education funding for student grants as opposed to institutional grants.

The main reservations I have about your study are the usual problems of getting good data. To the extent you can, I recommend getting copies of institution's audited financial statements and extracting the data, rather than having people answer a survey.

I do have a few specific comments about the indicators you have suggested. I have organized these remarks by topic:

- Short term financial resources - An alternate measure used by John Minter is a ratio of current liquid assets to current external liabilities. Another short term measure could be cash balance as a function of total general fund expenses.

- Risk exposure - The problem with measuring risk exposure is that risk comes from two directions. It is just as risky to have 95% of revenues from tuition as it is to have 50% of revenues from "soft money". Unfortunately, I don't know how you can establish prudent limits. I personally feel that no more than 80% of revenues should be from tuition and no more than 40% from "soft money."

- Deferred maintenance - This is a very difficult concept to measure, although a very important one. The problem is that for every school which has an estimate of their maintenance liability, there are ten that don't. And even those institutions with estimates could have a range of plus or minus 20% around their estimate. My recommendation is to use the following measure:

$$\frac{\text{2\% Plant book value - capital budget}}{\text{Plant book value}}$$

Although this is a first order, short-term proxy for what you are trying to measure, I feel that this approach can be consistently applied across institutions.

My best wishes for the success of your project.

Sincerely,

Michael E. Baker

Michael E. Baker
Director of Institutional Planning

MEB/iwn

APPENDIX F

Correspondence with
the Office of Education
and
Revisions to the Survey Design

AMERICAN COUNCIL ON EDUCATION
ONE DUPONT CIRCLE
WASHINGTON, D. C. 20036

ECONOMICS AND FINANCE UNIT

September 18, 1979

Dr. Salvatore B. Corrallo
Director, Postsecondary Programs Division
Office of Planning and Budget Evaluation
U.S. Office of Education
400 Maryland Ave., S.W., Room 4079
Washington, D.C. 20202

Dear Mr. Corrallo:

I have gone over the proposed survey with HEP staff, and they are ready to field test it, pending an official federal request for a survey.

The HEP staff does find this survey considerably different than their usual questionnaires. The survey results do not stand alone, either technically, in that so many other data elements are needed, or as a project, in that much further work needs to be done before policy recommendations can be made. To an organization that is accustomed to publishing results and moving on, the incomplete nature of this survey seems ominous to them. They would feel better if the part the survey is to play in overall policy development were more conclusively spelled out. I did my best to assure them that the full picture would be finalized shortly.

They still regard the dual problems of gaining cooperation and assuring anonymity to be tops on the list of difficulties. I think the field test will do much to shape our strategies in this regard.

Enclosed is the survey reflecting your suggestions and those of Dr. Moyé.

Sincerely,

Nathan Dickmeyer
Financial Planning Analyst

ND:rm
Enclosure

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON, D.C. 20202

August 31, 1979

Mr. Nathan Dickmeyer
Financial Planning Analyst
Economics and Finance Unit
American Council on Education
One Dupont Circle
Washington, DC 20036

Dear Mr. Dickmeyer:

There is little I can say with regard to your selection of indicators to measure financial distress. They look good to me. The rationale used appears reasonable and that is essentially all that can be expected at this stage of the state of the art. Clearly the big unknowns at this time relate to interpretation of the data after it has been collected, not only in terms of individual items but collectively as to how each interacts with one another. Answers to these questions necessarily await analysis of the data followed perhaps by field visitations. The latter activity is not possible in current study but as you know something similiar is proposed in the RFP on financial distress. Hopefully information collected from this HEP study will be used in that effort.

Copies of your report were sent out for review, but no replys have been received at this writing therefore, I propose that the survey instrument in Appendix D be submitted to the HEP staff for final review with one change. Data should be collected for every other year (1974-75, 1976-77 1978-79).

I have included a draft letter. Revise as necessary. I think it addresses concerns expressed in the report. When you have a final for each that is acceptable to the HEP folks let me know and we will finalize it.

Thanks for a good effort.

Sincerely,

Sal B. Corrallo, Director
Postsecondary Programs
Division/OED

Enclosure

PROPOSED HIGHER EDUCATION PANEL SURVEY

	1974-75	1976-77	1978-79
Financial			
1. Current Fund Assets	_____	_____	_____
2. Current Fund Liabilities	_____	_____	_____
3. Annual Debt Service Payments (all funds)	_____	_____	_____
4. Fund Balance, Quasi-endowment	_____	_____	_____
Enrollments			
5. "Continuing Education" Enrollments	_____	_____	_____
6. Matriculations, Transfer Students	_____	_____	_____
7. Applications, Total	_____	_____	_____
Faculty			
8. Estimated Tenured Faculty Compensation (include fringe benefits)	_____	_____	_____
9. Part-time Faculty, Full-time Equivalents (numbers)	_____	_____	_____
Student Receivables			
10. Student Accounts Receivable (at end of fiscal year, not including fall billings or credit accounts) (Less reserve for bad debts)	_____	_____	_____
Auxiliary Enterprises			
11. Dormitory Occupancy (percent of design capacity) fall term	_____	_____	_____
Loan Defaults			
12. Federally Guaranteed including HEW and HUD (any defaults?--yes/no)	_____	_____	_____
13. Sinking Fund (any defaults?--yes/no)	_____	_____	_____